

TITLE: FLAVOR COMPOSITION OF MARYLAND TOBACCO

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ABSTRACT: In the past years the flavorful components from flue-cured, burley, and Turkish tobaccos have been extensively examined and numerous publications written. Considerable information is now available to tobacco flavorists about the most desirable components needed to enhance the unique flavors of these tobaccos. However, very little is known about Maryland tobacco. Although Maryland is not used extensively, it nevertheless is believed to impart uniqueness to smoke. Consequently, a study was undertaken to determine if Maryland has any unique components not found in other tobaccos. Maryland tobacco was extracted with methylene chloride and the extract, after removal of the methylene chloride, was partitioned between hexane and methanol/water (90/10). The methanol/water portion was fractionated by preparative liquid chromatography. The resulting fractions were analyzed by GC and GC/MS. In addition an essential oil analysis of Maryland tobacco was carried out. The results from these studies were compared to the results of similar studies done with burley and flue-cured tobaccos. Approximately 142 components were identified and compared. Major differences between Maryland and flue-cured, between Maryland and burley low-stalk leaves, between Maryland and burley middle-stalk leaves, and the uniqueness of Maryland will be discussed.

REVIEW: The literature reveals very little information on the chemical constituents of Maryland tobacco. The purpose of this investigation was to look for compounds in Maryland tobacco not found in flue-cured or burley tobaccos. All stalk positions (three grades) of Maryland and flue-cured tobacco were used. Only low and middle stalk burley tobacco was examined. The nicotine level in Maryland tobacco was intermediate between flue-cured and burley tobacco. A total of 142 compounds were identified in Maryland tobacco. None of these were unique to this type tobacco relative to the others examined. The Maryland tobacco did seem to be generally higher in carotene-derived constituents.

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